



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,947	12/31/2001	David John Edwards	053694-0112	6623

7590 08/18/2003
Foley & Lardner
Suite 500
3000 K Street NW
Washington, DC 20007-5109

EXAMINER

GLENN, KIMBERLY E

ART UNIT	PAPER NUMBER
----------	--------------

2817

DATE MAILED: 08/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,947

Applicant(s)

EDWARDS ET AL.

Examiner

Kimberly E Glenn

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,7 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 5,8 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The corrected or substitute drawings were received on 5/15/03. These drawings are acceptable.

Claims 1, 6 and 11 are objected to because of the following informalities: With regards to claims 1 and 11, “the conductive” disclosed in lines 11 and 9 respectively should be changed to - - the conductive plate- -. With regard to claim 6, the claim discloses limitations for an apparatus but is dependent on a method claim (claim 12). Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

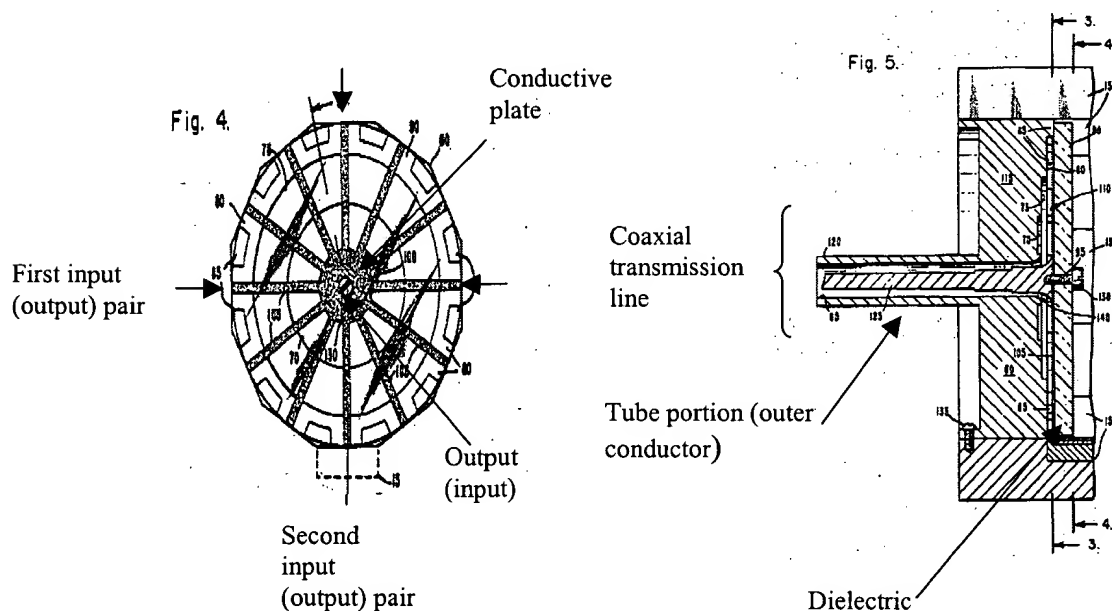
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 6, 7 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Pitzalis, Jr. US Patent 4,371,845.

Pitzalis, Jr. discloses a device including: a conductive plate for supporting electromagnetic waves; a first pair of inputs (or outputs) positioned on the conductive plate for setting up therebetween a first standing wave supported by the conductive plate; a second pair of inputs (outputs) positioned on the conductive plate for setting up therebetween a second standing wave supported by the conductive plate, and positioned such that the input signal of each of the first and second pairs of inputs is unaffected by the state or impedance of the other of the first and second pairs of inputs; and an output (input) positioned on the conductive so as to receive

Art Unit: 2817

power from both the first and second standing waves. The conductive plate is mounted parallel to a grounded structure and is separated from the grounded structure by a dielectric. Pitzalis, Jr. disclose a cylindrical rod which function as the center conductor of a coaxial transmission line is joined to a substrate by screw. The coaxial transmission line is made of cylindrical rod (center conductor) (125) and tube portion (outer conductor). Inherently, the outer conductor of the coaxial transmission line is connected to ground. The tube portion is connected to the base (60). Therefore, the conductive plate is mounted parallel to a grounded structure. The device is constructed as a microstrip structure. The conductive plate is circular and each respective pair of inputs is connected to the plate across a diameter of the plate. The output is positioned at substantially the antinode of the device. The device further comprises one or more additional pairs of inputs for setting up additional respective standing waves. The method steps to the above disclosed apparatus are inherent. (Figures 1, 4 and 5 and column 3 line 54 though column 7 line 21)



Response to Arguments

Applicant's arguments with respect to claims 1-7, 11 and 12 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 5, 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: With regards to claim 5, the prior art of record does not disclose or fairly teach the conductive plate being a polygon having an even number of sides and each respective pair of inputs is connected across an opposing pair of sides. With regards to claim 8, the prior art of record does not disclose or fairly teach the distance between a pair of inputs equals an integer number of the wavelength of the wave transmitted by the inputs. With regards to claim 9, the prior art of record does not disclose or fairly teach the device further comprising power dividers for providing the pairs of inputs from the signal sources.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Jachowski et al US Patent 64,644,303, Ajioka US Patent 4, 812,782, Tsuda et al US Patent 4,825,175, Saito et al US Patents 4,562,409, 4,598,254, Hsu et al US Patent 4,590,446, Nemit US Patent 4,263,586 and Smith et al US Patent 4,175,257.

Art Unit: 2817

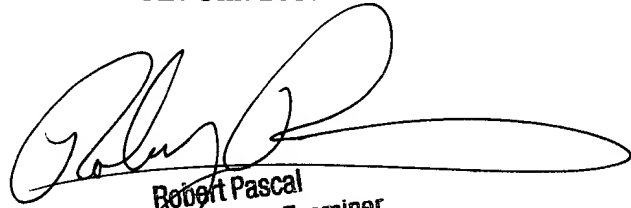
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly E Glenn whose telephone number is (703) 306-5942. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Kimberly E Glenn
Examiner
Art Unit 2817

keg
August 7, 2003



Robert Pascal
Supervisory Patent Examiner
Technology Center 2800